induced nephropathy (CIN) is one type of AKI and is associated with increased morbidity and mortality. We analyzed 273 patients with either diabetes or preexisting impaired kidney function getting intra-arterial contrast media (CM) for coronary angiograms. Blood was taken for determination of cystatin C before and 24 h after exposure to intra-arterial CM. Acute kidney injury was defined as the increase of baseline cystatin C of at least 25%. Urinary ET-1 and neutrophil gelatinase-associated lipocalin (N-GAL) concentrations were analyzed in spot urine 24 h after CM exposure. 27 patients out of the 273 patients developed CIN. Urinary ET-1 ($r = -0.168$, $p = 0.006$) and N-GAL ($r = -0.173$, $p = 0.004$) concentrations were inversely correlated with the change of cystatin C 24 h after CM exposure. Urinary ET-1 concentrations in spot urine of patients without CIN were 0.659 pg/ml and 0.379 pg/ml in patients with CIN respectively ($p = 0.004$). Urinary N-GAL concentrations in spot urine of patients without CIN were 19.92 ng/ml and 8.61 ng/ml in patients with CIN, respectively ($p = 0.002$). In conclusion, the magnitude of alterations in urinary ET-1 excretion is comparable to alterations of the reference biomarker N-GAL. In contrast to other forms of AKI, urinary concentrations of both biomarkers are reduced indicating potentially differences in the underlying pathways leading to kidney damage after CM exposure as compared to other forms of AKI.

doi:10.1016/j.lfs.2014.01.028

A predictor to indicate the necessity of measurement of endothelin and to give the calcium antagonist medicine in outpatients

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Purpose: This study aimed to examine a predictor to indicate the necessity of measurement of the endothelin and to give the calcium antagonist medicine of dihydropyridine in outpatients. Method: The investigation was performed on August 25, 2005 to September 19, 2009. The data of patient profile and diagnosis, blood pressure, blood tests, and current medication were collected after obtaining approval of the ethics committee for clinical study from 3 hospitals. Result: The effective number of patients for analysis was 376; mean age 59.2 ± 10.4 year. The average clinical values were as follows: weight, 64.4 ± 12.8; BMI, 24.8 ± 4.0; SBP, 129.8 ± 17.0mm Hg; DBP,78.3 ± 10.5mm Hg; FPG, 119.0 ± 52.9 mg/dl. Final stepwise multiple regression analysis indicated predictor y comprising 4 explained independent variables; age, β.493; weight, β.274; FPG, β.162; SBP, β.158. The Breslow χ^2 test using the Kaplan–Meier command yielded a significant χ^2 10.44 of y both DM and HT in IHD. The F-test indicated a significance F7.50 for y with calcium antagonist medicine as compared to y without calcium antagonist medicine ($P < 0.01$). **Conclusion**: This study developed the estimator y as a significant predictor to give the calcium antagonist medicine.

doi:10.1016/j.lfs.2014.01.029

Assessment of circulatory endothelin-1 level among pre- and post-menopausal rural women in Bangladesh: Result from a population-based study

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Background: Prevalence of non-communicable diseases is a challenging problem among menopausal women especially in a least developed country like Bangladesh, where majority of are women suffering from at least one chronic disease after menopausal age. The main objective of this study was to determine the circulatory level of endothelin (ET)-1 in Bangladeshi pre- and post-menopausal women living in the rural setting and its association with various cardiometabolic risk factors. Methods: This study is based on a community based cross-sectional survey among 1802 rural women aged ≥15 years. Plasma level of ET-1 was measured by ELIZA. Logistic regression was used to estimate the association between circulatory ET-1 level and cardiomatabolic risk factors. Results: ET-1 levels were significantly higher in post-menopausal subjects (post-menopause vs. pre-menopause: 3.92 ± 0.28 vs. 3.28 ±0.14 pg/ml, $p = 0.043$). In multivariable analyses, we found that ET-1 had significant positive associations with only plasma cholesterol level (beta = 0.005, $p = 0.012$) even after adjusting for age. Metabolic syndrome was presented in 25.6% respondents and it was more prevalent among post-menopausal (39.3%) as compared to pre-menopausal (16.8%) women. Prevalence of high blood pressure, elevated fasting blood glucose, and high triglyceride were significantly higher in post-menopausal women than in pre-menopausal women ($p < 0.05$). Mean values of systolic blood pressure, plasma levels of triglyceride, HDL, cholesterol and vascular endothelial growth factor were significantly higher in post-menopause group compared to pre-menopause group. Conclusions: The higher level of circulatory ET-1 may be associated with higher prevalence of metabolic syndrome and other cardiometabolic risk factors among post-menopausal women in many developing countries like Bangladesh and proper intervention strategies should be warranted.

doi:10.1016/j.lfs.2014.01.030

Is excessive blood pressure elevation during resistance exercise a risk factor for arterial stiffening?

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We previously demonstrated that plasma endothelin-1 (ET-1) concentration is related to resistance exercise-induced arterial stiffening. Additionally, a previous study pointed out that a transient increase in plasma ET-1 concentration after resistance exercise was correlated with blood pressure increase during the exercise. Exaggerated systolic blood pressure (SBP) response to exercise is an independent predictor for future cardiovascular disease. Hence, we hypothesized that excessive elevation in SBP during resistance exercise increases arterial stiffness via ET-1 secretion. The aim of this study was to investigate the association of arterial stiffness with SBP during resistance exercise. After measurements of resting hemodynamic parameters, forty-one middle-aged and older subjects performed leg press, a representative resistance exercise, at 20%, 40% and 60% of their one-repetition maximum. Average SBP during resistance exercise, age and resting heart rate (HR) were